

IN THE CLAIMS:

Please cancel claims 1, 2, 7-10, 15-20, 29, and 30 herein. Claims 3-6, 11-14, and 21-28 were previously canceled. Please add new claims 31-48. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-30 (Canceled)

31. (New) A method of reducing oxidation of an electrically conductive material, comprising:

forming a first dielectric layer on a semiconductor structure, the first dielectric layer comprising a depression therein;

filling the depression with an electrically conductive material; and

reacting a chemical composition with an upper surface of the electrically conductive material to form a chemical compound more resistant to oxidation than the electrically conductive material.

32. (New) The method of claim 31, wherein filling the depression with an electrically conductive material comprises filling the depression with a refractory metal.

33. (New) The method of claim 31, wherein reacting a chemical composition with an upper surface of the electrically conductive material comprises reacting the chemical composition with at least one monolayer of the upper surface of the electrically conductive material.

34. (New) The method of claim 31, wherein reacting a chemical composition with an upper surface of the electrically conductive material comprises reacting a nitrogen-containing

composition with the upper surface of the electrically conductive material.

35. (New) The method of claim 34, wherein reacting a nitrogen-containing composition with the upper surface of the electrically conductive material comprises exposing the upper surface of the electrically conductive material to the nitrogen-containing composition for a period of time less than or equal to approximately 30 seconds.

36. (New) The method of claim 31, wherein reacting a chemical composition with an upper surface of the electrically conductive material comprises reacting ammonia, diatomic nitrogen, or nitrogen-containing silane with the upper surface of the electrically conductive material.

37. (New) The method of claim 31, wherein reacting a chemical composition with an upper surface of the electrically conductive material comprises forming a nitride of a refractory metal of the electrically conductive material on the upper surface or forming an adsorbed complex of a nitrogen-containing composition on the upper surface.

38. (New) The method of claim 31, wherein reacting a chemical composition with an upper surface of the electrically conductive material comprises providing a nitrogen-containing composition, heating the first dielectric layer to a temperature of less than or equal to approximately 400°C, and exposing the upper surface to the nitrogen-containing composition to form the chemical compound.

39. (New) The method of claim 31, further comprising forming a second dielectric layer over the electrically conductive film and the first dielectric layer, wherein the electrically conductive film is unoxidized and wherein the second dielectric layer is adhered to the electrically conductive film.

40. (New) A method of reducing oxidation of an electrically conductive material, comprising:

forming a dielectric layer on a semiconductor structure, the dielectric layer comprising a depression therein;

filling the depression with an electrically conductive material; and

adsorbing a chemical composition onto an upper surface of the electrically conductive material to form a chemical compound more resistant to oxidation than the electrically conductive material.

41. (New) The method of claim 40, wherein adsorbing a chemical composition onto an upper surface of the electrically conductive material comprises adsorbing a nitrogen-containing composition onto the upper surface of the electrically conductive material.

42. (New) The method of claim 40, wherein adsorbing a chemical composition onto an upper surface of the electrically conductive material comprises adsorbing ammonia, diatomic nitrogen, or nitrogen-containing silane onto the upper surface of the electrically conductive material.

43. (New) The method of claim 40, wherein adsorbing a chemical composition onto an upper surface of the electrically conductive material comprises forming an adsorbed complex of a nitrogen-containing composition onto the upper surface.

44. (New) The method of claim 40, wherein adsorbing a chemical composition onto an upper surface of the electrically conductive material comprises providing a nitrogen-containing composition, heating the dielectric layer to a temperature of less than or equal to approximately 400°C, and exposing the upper surface to the nitrogen-containing composition to form the chemical compound.

45. (New) A method of reducing oxidation of an electrically conductive material, comprising, comprising:

reacting a chemical composition with at least one monolayer of an upper surface of an electrically conductive material to form a chemical compound more resistant to oxidation than

the electrically conductive material, wherein the electrically conductive material is unoxidized.

46. (New) The method of claim 45, wherein reacting a chemical composition with at least one monolayer of an upper surface of an electrically conductive material comprises reacting a nitrogen-containing composition with the at least one monolayer of the upper surface of the electrically conductive material.

47. (New) The method of claim 45, wherein reacting a chemical composition with at least one monolayer of an upper surface of an electrically conductive material comprises reacting ammonia, diatomic nitrogen, or nitrogen-containing silane with the at least one monolayer of the upper surface of the electrically conductive material.

48. (New) The method of claim 45, wherein reacting a chemical composition with at least one monolayer of an upper surface of an electrically conductive material comprises forming a nitride of a refractory metal of the electrically conductive material on the upper surface or forming an adsorbed complex of a nitrogen-containing composition on the upper surface.